

REMARKS

The Examiner is thanked for the thorough examination of the present application and the indication that claims 8-14 contain allowable subject matter. The Office Action, however, tentatively rejected the remaining claims. In response, Applicant submits the following remarks and requests reconsideration and withdrawal of the rejections.

The Office Action noted certain informalities with both the specification and claim 12. Applicant has addressed and accommodated these informalities through the foregoing amendments.

Response To Claim Rejections Under 35 U.S.C. §103

Claims 1, 2 and 6 stand rejected under 35 U.S.C. §103 as allegedly unpatentable over Dangat (US. 6507213) in view of Harari et al (US. 5887145). Claims 3 and 4 stand rejected under 35 U.S.C. §103 as allegedly unpatentable over Dangat in view of Harari et al and further in view of Ikezawa (US2005/0222300). Claim 5 stands rejected under 35 U.S.C. §103 as allegedly unpatentable over Dangat in view of Harari et al and further in view of Tsai (US6028319). Claim 7 stands rejected under 35 U.S.C. §103 as allegedly unpatentable over Dangat in view of Harari et al and further in view of Yee (US2003/2030799).

Applicant respectfully traverses this rejection for at least the reason that the combination of Dangat in view of Harari fails to establish a *prima facie* case of obviousness. In this regard, a claim cannot be deemed obvious in view of a combination of references if the references "teach away" from the claim. See *In re Gurley*, 2 F.3d 551, 31 USPQ2d 1130, 1131 (Fed Cir. 1994) ("A reference may be said to teach away

when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. In general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant.”)

Independent claim 1 recites:

1. A programmable logic module, comprising:
a first printed circuit board having a socket and a downloading unit;
a field programmable gate array (FPGA) disposed on the first printed circuit board;
a nonvolatile memory storing program codes for programming the field programmable gate array, wherein the nonvolatile memory is fixed by soldering to a second printed circuit board with a plurality of pins corresponding to the socket, and the second printed circuit board is plugged into the socket of the first printed circuit board; wherein the nonvolatile memory downloads program codes thereof to the field programmable gate array by the downloading unit.

(*Emphasis added*). Claim 1 patently defines over the cited art for at least the reason that the cited art fails to disclose at least the features emphasized above.

Independent claim 1 is allowable for at least the reason that the combination of Dangat in view of Harari fails to establish a *prima facie* case of obviousness. More specifically, the references “teach away” from the subject matter (when taken as a whole) of claim 1. As cited in page 3, the Office Action admits that Dangat fails to disclose the external memory is fixed by soldering to a second PCB. The Office Action, instead, alleges that Harari teaches a nonvolatile memory on a second PCB plugged in to a socket of a first PCB and that it would, thus, have been obvious to one of ordinary

skill in the art to obtain the claimed embodiments from the combination of these two references. Applicant respectfully disagrees.

As cited in col.2, lines 53-58 in Dangat, "The memory 102 may be implemented as an external memory. The memory 102 and the PLD may each be implemented on a separate die. The die containing the memory 102 may be mounted, in one example, in the same package as the die containing the PLD". Namely, Dangat discloses the nonvolatile memory (memory 102) and the field programmable gate array (PLD) are implemented on separate dies formed in the same package. As the die containing the memory 102 and the die containing the PLD are in the same package, it is impossible to dispose die containing the memory 102 and the die containing the PLD on different printed circuit boards. Hence, there is no reason to dispose the memory 102 to a second PCB, which is plugged into the PCB disposed with the die containing the PLD. For at least this reason, Dangat teaches away from the claimed embodiments. As the combination of Dangat in view of Harari fails to establish a *prima facie* case of obviousness, the rejection of claim 1 should be withdrawn.

Further, Examiner asserts that Harari teaches a nonvolatile memory on a second PCB plugged in to a socket of a first PCB, but there is no reason to combine Harari and Dangat references because the nonvolatile memory cannot be removed from the PCB with the PLD, when they are packaged in the same package (as taught by Dangat). As there is no reason to combine Harari and Dangat references to obtain the claimed claim 1, the rejection of claim 1 should be withdrawn.

Because independent claim 1 is allowable over the prior art of record, its dependent claims 2-7 are allowable as a matter of law, for at least the reason that these dependent

claims contain all features/elements/steps of their respective independent claim 1. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Additionally and notwithstanding the foregoing allowability of these dependent claims, the dependent claims recite further features and/or combinations of features (as is apparent by examination of the claim itself) that are patentably distinct from the prior art of record. Hence, there are other reasons why this dependent claim is allowable.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1-14 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested.

No time extensions or fees are believed to be due in connection with this amendment and response to Office Action. If, however, any such extensions are required, the undersigned hereby petitions for such, and you are hereby authorized to charge any fee that may be due in connection with this submission to deposit account No. 20-0778.

Respectfully submitted,

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